IN THE CLAIMS

Please amend claims 1, 4, 7, 10-11, and 14-19 as indicated below.

Please add new claims 22-31 as indicated below.

1. (Currently Amended) A method comprising:

applying an inverse wavelet transform to data repeatedly for a plurality of decomposition levels during quantization of wavelet coefficients that is performed using a plurality of stages including one or more intermediate stages and a final stage; and

for each of the plurality of decomposition levels, clipping, after each application of the inverse wavelet transform during the one or more intermediate stages prior to the final stage, any value generated as a result of application of the inverse wavelet transform that exceeds a predetermined range associated with that decomposition level subband of the inverse wavelet transform.

2. (Original) The method defined in Claim 1 wherein the inverse wavelet transform comprises a 5,3 wavelet transform filter.

3. (Original) The method defined in Claim 1 wherein the inverse wavelet transform comprises a 9,7 wavelet transform filter.

4. (Currently Amended) An article of manufacture comprising one or more recordable media having executable instructions stored thereon which, when executed by a machine, cause the machine to:

apply an inverse wavelet transform to data repeatedly for a plurality of decomposition levels during quantization of wavelet coefficients that is performed using a plurality of stages including one or more intermediate stages and a final stage; and

for each of the plurality of decomposition levels, clip, after each application of the inverse wavelet transform during the one or more intermediate stages prior to the final stage, any value generated as a result of application of the inverse wavelet transform that exceeds a predetermined range associated with that decomposition level, subband and inverse wavelet transform.

5. (Original) The article of manufacture defined in Claim 4 wherein the inverse wavelet transform comprises a 5,3 wavelet transform filter.

6. (Original) The article of manufacture defined in Claim 4 wherein the inverse wavelet transform comprises a 9,7 wavelet transform filter.

7. (Currently Amended) An apparatus comprising:

means for applying an inverse wavelet transform to data repeatedly for a plurality of decomposition levels during quantization of wavelet coefficients that is performed using a plurality of stages including one or more intermediate stages and a final stage; and

for each of the plurality of decomposition levels, means for clipping, after each application of the inverse wavelet transform during the one or more intermediate stages prior to the final stage, any value generated as a result of application of the inverse wavelet transform that exceeds a predetermined range associated with that decomposition level, subband and inverse wavelet transform.

8. (Original) The apparatus defined in Claim 7 wherein the inverse wavelet transform comprises a 5,3 wavelet transform filter.

9. (Original) The apparatus defined in Claim 7 wherein the inverse wavelet transform comprises a 9,7 wavelet transform filter.

10. (Currently Amended) A method comprising:

applying a forward wavelet transform to input data in a 4:x:x format to generate encoded data, where x is not equal to 4; and

quantizing level 1 coefficients in high-low (HL) and high-high (HH) subbands to zero for chrominance components without changing a luminance component of the input data, the quantized level 1 coefficients in HL and HH subbands having zero values being used to construct samples of the chrominance components to have a substantially identical format as the luminance component when generating the encoded data, such that the encoded data resembles 4:4:4 formatted data.

New matter

11. (Currently Amended) The method defined in Claim 10 further comprising quantizing level 1 coefficients in a low-high (LH) subband to zero for the chrominance components of the input data.

12. (Original) The method defined in Claim 11 wherein the input data is 4:1:1 formatted data.

13. (Original) The method defined in Claim 10 wherein the input data is 4:2:2 formatted data.

14. (Currently Amended) An apparatus comprising:

means for applying a forward wavelet transform to input data in a 4:x:x format to generate encoded data, where x is not equal to 4; and

means for quantizing level 1 coefficients in high-low (HL) and high-high (HH) subbands to zero for chrominance components without changing a luminance component of the input data, the quantized level 1 coefficients in HL and HH subbands having zero values being used to construct

samples of the chrominance components to have a substantially identical format as the luminance component when generating the encoded data, such that the encoded data resembles 4:4:4 formatted data.

15. (Currently Amended) The apparatus defined in Claim 14 further comprising means for quantizing level 1 coefficients in a low-high (LH) subband to zero for the chrominance components of the input data.

16. (Currently Amended) The apparatus defined in Claim [[11]] 15 wherein the input data is 4:1:1 formatted data.

17. (Currently Amended) The apparatus defined in Claim [[10]] 14 wherein the input data is 4:2:2 formatted data.

18. (Currently Amended) An article of manufacture comprising one or more recordable media having executable instructions stored thereon which, when executed by a machine, cause the machine to:

apply a forward wavelet transform to input data in a 4:x:x format to generate encoded data, where x is not equal to 4; and

quantize level 1 coefficients in high-low (HL) and high-high (HH) subbands to zero for chrominance components without changing a luminance component of the input data, the quantized level 1 coefficients in HL and HH subbands having zero values being used to construct samples of the chrominance components to have a substantially identical format as the luminance component when generating the encoded data, such that the encoded data resembles 4:4:4 formatted data.

19. (Currently Amended) The article of manufacture defined in Claim 18 further comprising quantizing level 1 coefficients in a low-high (LH) subband to zero for the chrominance components of the input data.

20. (Original) The article of manufacture defined in Claim 19 wherein the input data is 4:1:1 formatted data.

21. (Original) The article of manufacture defined in Claim 18 wherein the input data is 4:2:2 formatted data.

22. (New) The method defined in Claim 1, wherein each of the plurality of decomposition levels has a predetermined range of values for clipping data after application of a wavelet transform at the respective decomposition level, at least two of the decomposition levels having different predetermined ranges.

23. (New) The method defined in Claim 2, further comprising, after the inverse wavelet transform for 8-bit input samples, clipping low-pass coefficients exceeding the respective predetermined range to a value ranging from approximately –191 to 191.

24. (New) The method defined in Claim 23, further comprising clipping high-pass coefficients exceeding the respective predetermined range to a value ranging from approximately –255 to 255.

25. (New) The article of manufacture defined in Claim 4, wherein each of the plurality of decomposition levels has a predetermined range of values for clipping data after application of a wavelet transform at the respective decomposition level, at least two of the decomposition levels having different predetermined ranges.

26. (New) The article of manufacture defined in Claim 5, wherein the instructions further cause the machine to, after the inverse wavelet transform for 8-bit input samples, clip low-pass coefficients exceeding the respective predetermined range to a value ranging from approximately –191 to 191.

27. (New) The article of manufacture defined in Claim 26, wherein the instructions further cause the machine to clip high-pass coefficients exceeding the respective predetermined range to a value ranging from approximately –255 to 255.

28. (New) The apparatus defined in Claim 7, wherein each of the plurality of decomposition levels has a predetermined range of values for clipping data after application of a wavelet transform at the respective decomposition level, at least two of the decomposition levels having different predetermined ranges.

29. (New) The apparatus defined in Claim 8, further comprising means for clipping a low-pass coefficients exceeding the respective predetermined range to a value ranging from approximately –191 to 191 after applying the inverse wavelet transform on 8-bit input samples.

30. (New) The apparatus defined in Claim 29, further comprising means for clipping a high-pass coefficients exceeding the respective predetermined range to a value ranging from approximately –255 to 255.

31. (New) A method comprising:

receiving input data having a format other than a 4:4:4 format, the input data to be encoded as output data having a 4:4:4 format;

applying a forward wavelet transform to the input data;

quantizing level 1 coefficients in high-low (HL) and high-high (HH) subbands to zero for chrominance components without changing a luminance component of the input data if the input data has a 4:2:2 format; and

quantizing level 1 coefficients in high-low (HL), low-high (LH), and high-high (HH) subbands to zero for chrominance components without changing a luminance component of the input data if the input data has a 4:1:1 format,

wherein the quantized level 1 coefficients in HL, LH, and HH subbands having zero values are used to construct samples of the chrominance components to have a substantially identical format as the luminance component for the output data, such that the output data resembles 4:4:4 formatted data.

IN THE DRAWINGS

The attached sheets of formal drawings includes typed labels and changes to Figures 1 and 3. The attached sheets replace the original sheets.

Specifically, "(Prior Art)" has been added to Figure 1. In Figure 3A, "320" and "321" have been changed to "310" and "311" respectively.

Attachment: 26 Sheets of formal drawings.